Promoting recovery from negative symptoms

Promoting recovery from negative symptoms: An attachment theory perspective

ABSTRACT

Although advances have been made in the understanding and treatment of positive symptoms of psychosis such as paranoid thinking and voice-hearing, negative symptoms such as loss of motivation and reduced social functioning often present a major barrier to recovery. The psychosocial treatment options for negative symptoms should benefit from systematic examination and refinement, both in terms of the models used to understand symptom development and maintenance as well as the specific treatment techniques. We examine the possibility that negative symptom burden is particularly related to insecure-avoidant attachment style and that this manifests in difficulties with understanding one's own mental states and the minds of others. Drawing on key studies that have examined mentalisation and related processes alongside negative symptom profile data, we provide a model of negative symptom formation and maintenance along with a case example that portrays the use of these principles in case formulation and treatment.

Individuals characterised as having the negative symptoms of psychosis participate less in constructive or pleasurable activity and often appear disengaged from interpersonal situations. This group of people also experience less positive emotion, heightened levels of negative affect, and often present as devoid of emotional expression. Their speech can appear impoverished and corresponding mental experiences can be profoundly disrupted. Such difficulties are associated with significant impairments in psychosocial functioning (Hunter & Barry, 2012), lower quality of life (Ho et al, 2014) and poorer recovery (Milev et al, 2005). Response to both pharmacotherapy and psychological interventions appears limited (Fusar-Polis et al, 2014; Velthorst et al, 2015). Furthermore, the diversity of the techniques employed in psychological treatment trials makes it difficult to ascertain potential ingredients that bring about improvement (Thomas, 2015).

To date, many theoretical frameworks underpinning both pharmacological and psychological treatments have mainly reflected the historical understanding of negative symptoms as diminished or absent behaviour, functioning, and experience (Aleman et al., 2016). We argue that, seen through the lens of attachment theory, negative symptoms can be at least partially understood within a developmental framework of adaptation and resilience, as indicators of a learned coping response in the face of overwhelming life adversity that includes both externally experienced events and painful affects that are avoided (Lysaker et al., 2016). Hence, negative symptoms may be seen as responses involving emotional and social withdrawal that emerge from threats to self- security. This alternative perspective may enrich recovery-orientated approaches by supporting attempts to re-engage with life.

The Nature of Negative Symptoms

Even the most severe negative symptoms are known to fluctuate (Ventura et al, 2004). Current cognitive behavioural therapy (CBT) models propose that variations in negative symptoms relate to changes in self-defeating beliefs (Grant & Beck, 2009; Rector et al, 2005). A recent meta-analysis examining changes in negative symptoms in outpatient populations challenges the view that there is limited improvement over time (Savill et al, 2014). Instead, the results suggest that most patients exhibit some recovery of negative symptoms over time. So, rather than viewing negative symptoms as unresponsive to treatment and predictive of an inevitably chronic illness course, the rate of recovery may be helped by developing more refined psychosocial interventions.

Negative symptoms can be observed in individuals at high risk of developing psychosis (Piskulic et al, 2012), they predict likelihood of transition to psychosis (Demjaha et al, 2012, Piskulic et al, 2012) and can feature during first episode presentations (Lyne et al, 2012). Importantly, early difficulties in adjustment and psychosocial functioning link to greater severity of negative symptoms in both first episode and chronic populations (MacBeth & Gumley, 2008). Whilst it has been argued that problems with poor premorbid functioning and the early manifestation of negative symptoms reflect a neurodevelopmental disorder that becomes evident during adolescence (e.g. Fenton & McGlashan, 1991), it has also been established that exposure to socioeconomic deprivation (Drukker et al, 2006), discrimination (Janssen et al, 2003), childhood abuse, neglect and bullying (Varese et al, 2012), and attachment-related disruptions to secure attachments elevate the risk of psychosis. As

Macbeth and Gumley (2008) point out, it would be reasonable to expect that early adversity impacts not only on risk for psychosis, but will also affect premorbid adjustment prior to the development of psychosis. Thus, the difficulty in distinguishing problems in premorbid adjustment, functioning and quality of life from negative symptoms (Malla & Payne, 2005) may be explained within a developmental framework focused on how life experience and learned self-regulatory processes are key risk mechanisms implicated in the early ontogeny of negative symptoms. It has also been proposed that negative symptoms can reflect protective responses to overwhelming life experience including psychosis itself (e.g. Read et al, 2001; Stampfer, 1990). In line with this, psychological adjustment following psychosis, expressed as recovery style, has been shown to both independent and predictive of poorer outcome on a range of variables, including negative symptoms. For example, individuals with a sealing-over recovery style – a way of coping that minimises the significance of symptoms and their impact - had worse negative symptom and quality of life scores at 12 months than those characterised as having integrative or mixed recovery styles (Tait et al, 2003; Thompson et al, 2003).

Attachment, mentalization and negative symptoms

Against this background, the emerging evidence that attachment insecurity is associated with negative symptoms is of considerable interest. The impact of early attachment experience on interpersonal functioning and relationships, emotion regulation, and identity formation is well established. Insecure attachment classifications, specifically dismissing/avoidant attachment, appear to be overrepresented in psychosis (Gumley et al, 2014). Moreover, avoidant attachment, characterised by affective deactivation, interpersonal distancing and difficulty

recalling emotive memories of past experiences, has been specifically associated with negative symptoms in non-clinical and clinical populations (see Table 1). Given that self-report measures may be subject to biases arising from the activation of the attachment system whereby individuals with avoidant attachment styles can tend to report their attachment as secure (e.g. Gumley et al, 2014), these may be underestimates. Recent evidence shows that attachment security, evaluated using the narrative-based Adult Attachment Interview classification system, predicts recovery from negative symptoms at 12 months after controlling for relevant baseline variables (Gumley et al., 2014). There are also particular associations between attachment avoidance and specific negative symptom subtypes such as a loss of the ability to experience pleasure (anhedonia), or social and emotional withdrawal (e.g. Berry et al, 2006, 2007; Wilson & Costanzo, 1996; Korver-Nieberg et al, 2015). In summary, individuals with avoidant attachment style demonstrate restrictions of social-cognitive-affective experience, a pattern frequently observed in people diagnosed with schizophrenia (Gumley, 2011). We propose that these early emotional adaptation processes confer a significant risk for the subsequent emergence of negative symptoms such as asociality, affective flattening, reduced experience of thoughts, diminished motivation, and anhedonia.

Table 1: Attachment Status and Negative Symptoms				
Study	Design	Sample Characteristics	Key Measures	Key findings
i. NON-CLINICAL SAMPLES				
Wilson & Costanzo (1996)	Cross-sectional study of attachment style and sub-clinical psychotic phenomena (schizotypy, attentional impairment, psychosis proneness).	273 university students	Adult Attachment Scale Scale of Attitudes and Experiences (schizotypy)	Insecure-avoidant attachment style associated with negative schizotypy. Secure attachment protects individuals from anhedonia (r^2=between .06 and .14 for different assessments)
Berry et al. (2006)	Cross-sectional study of attachment style and sub-clinical psychotic phenomena	323 university students	PAM Social Anhedonia Scale	Insecure-avoidant attachment patterns were associated with social anhedonia (r=.44)
Berry et al (2007)	Cross-sectional analogue study of attachment, negative life events and schizotypy	304 university students	PAM Oxford-Liverpool Inventory of Feelings and Experiences scale (introvertive anhedonia)	Attachment avoidance associated with introvertive anhedonia (r=.50)
ii. CLINICAL SAMPLE STUDIES				
Ponizovsky et al. (2007)	Cross-sectional with, between and within groups comparisons	30 male inpatients diagnosed with schizophrenia spectrum disorders and 30 age and gender matched controls	Hazan & Shaver questionnaire measure of attachment PANSS	Patients with high PANSS negative symptom scale scores also showed higher rates of insecure-avoidant attachment

Berry et al. (2008)	Prospective study with follow up at 6 months	96 individuals diagnosed with schizophrenia spectrum diagnoses.	PAM PANSS	PANSS negative symptoms were positively correlated with insecure-avoidant attachment at baseline (r=.24)
Kvrgic et al (2011)	Cross-sectional	127 individuals diagnosed with chronic schizophrenia or schizoaffective disorder	PAM PANSS	No association between attachment avoidance and negative symptoms
Gumley et al. (2014)	12-month longitudinal study with assessments at 6 month intervals	58 first episode psychosis service users in specialist public mental health services	Adult Attachment Interview PANSS	68% of the sample exhibited an insecure attachment style (48.1% dismissing, 20.4% preoccupied). Attachment at baseline predicted negative symptom recovery at 6 and 12 months.
Korver-Nieberg et al (2015)	Cross-sectional study of people diagnosed with schizophrenia spectrum disorders	500 patients	Relationship Questionnaire PANSS	Attachment avoidance was not associated with overall negative symptom scores but there was evidence of associations with social and emotional withdrawal
Notes PAM – Psychosis Assessment Measure; PANSS – Positive and Negative Syndrome Scale				

It has also been suggested that negative symptoms may develop as a consequence of reduced capacity for mentalization (Gumley et al 2014; Harder, 2014). Mentalization is conceptually related to other social cognition capacities that have received considerable attention. For example, Frith's (1992) cognitive neurophysiological model of schizophrenia proposed that difficulties with thinking about mental states (Theory of Mind), including monitoring one's own intentional acts, contribute substantially to the development of negative symptoms. The notion that understanding of one's own mind and the mind of others are central to understanding negative symptoms has been corroborated by studies associating Theory of Mind and other social cognition impairments with behavioural indicators of negative symptoms (Sprong et al, 2007), negative/disorganization symptoms (Ventura et al, 2013) and social/functional outcomes (Bora et al, 2009; Fett et al, 2010). It is now known that social cognition interacts with negative self-concepts, such as those related to interpersonal competence, to influence negative symptom expression (Lincoln et al, 2011). In summary, social interaction can be affected by very specific processes (e.g. reading facial expressions) as well as much more complex and integrated processes (e.g. combining multiple sources of information into complex and flexible understandings of the reasons for one's own behaviour and the behaviour of others).

Mentalization and metacognition have at times been used in the psychosis literature more or less interchangeably to refer to the complex representation of mental states of self and others (e.g. Semerari et al, 2003; Lysaker et al 2013). We emphasise mentalization's focus on the way in which these psychological competencies are learnt in attachment or relational contexts. As conceptualised by Peter Fonagy and colleagues, mentalization "describes the way humans make sense of their social world

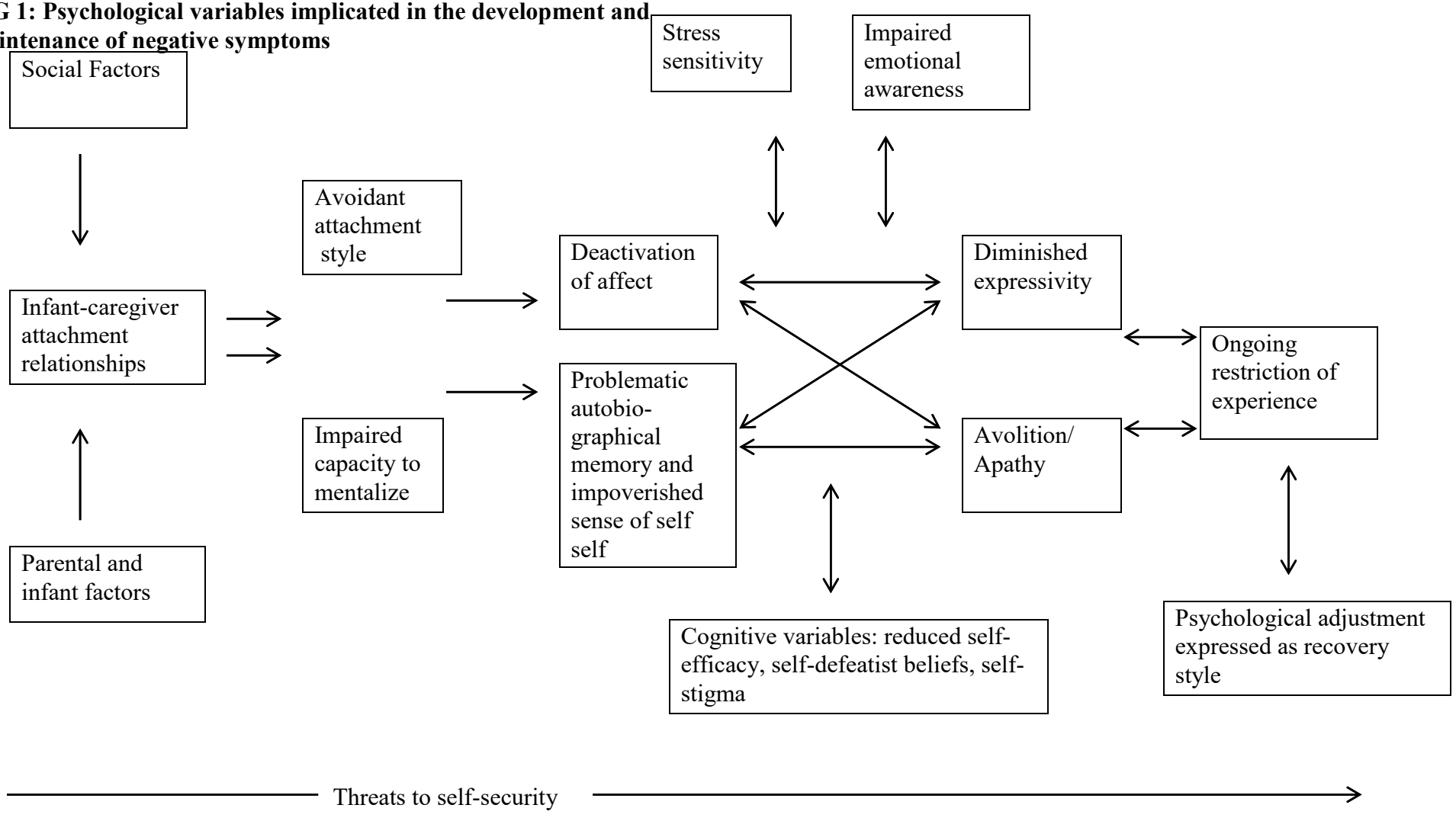
by imagining the *mental* states (e.g., beliefs, motives, emotions, desires, and needs) that underpin their own and others' behaviors in interpersonal interactions" (Choi-Kain & Gunderson, 2008, p.1127). Mentalization capacity is facilitated through early attachment experience and a caregiver's contingent mirroring of the infant's affective states, and is consequently intrinsically linked to an individual's capacity to employ affect regulation strategies. Secure attachments provide the psychosocial foundations for acquiring the capacity to develop adequate understanding of one's own and others' minds. Effective mentalization allows the individual to organise changing social information in a way that regulates emotions, provides a guide to action, and supports the person's ability to act independently as an agent of their own destiny. When attachment is disrupted, the ability to have complex thoughts about the self and the world can be adversely affected and this results in less resilience when faced with conflicts and dilemmas relating to social interactions or making sense of one's internal experiences (Fonagy & Target, 1997).

Mentalization is more severely compromised in dismissing as opposed to secure or preoccupied attachment states of mind in individuals with psychosis (Macbeth et al, 2011). We identified 14 studies suggesting links between self/other mental state processing and negative symptoms (Buck et al, 2014; Hamm et al, 2012; Lysaker et al, 2005, 2010, 2011, 2015; Macbeth et al, 2011, 2014, 2015; McLeod et al, 2014; Minor & Lysaker, 2014; Mitchell et al, 2012; Nicolo et al, 2012; Rabin et al, 2014). These relationships extend across cognitive, emotional and integrative aspects of mentalizing processes (Macbeth et al, 2015). The majority of studies are cross-sectional, but three indicate that the relationship is linked to the expression of negative symptoms over time in both first episode samples and samples with more

established diagnoses populations (Hamm et al, 2012; Lysaker et al, 2015; McLeod et al, 2014). More refined studies could describe and clarify these relationships in terms of specific metacognitive processes and/or negative symptom subtypes. For example, there is evidence that reduced ability to form and use complex ideas about self and others can exacerbate anhedonia, even in the absence of depressed mood (Buck et al, 2014).

In summary, there is evidence that both avoidant attachment and reduced capacity for mentalization are implicated in negative symptom expression in both early and later stage psychosis. In Figure 1, we propose an explanatory framework, expanding on previous proposals by Gumley et al (2014) and Harder (2014), which suggests how attachment theory could inform our understanding of negative symptoms. In the sections below, we describe potential roles of affect regulation mechanisms and autobiographical memory, considering how these may inform the emergence and maintenance of negative symptoms such as diminished expressivity and avolition/apathy.

FIG 1: Psychological variables implicated in the development and maintenance of negative symptoms



Affect regulation

Flat affect, characterised by unchanging facial expression and paucity of gesture, is prominent during first episode and more established presentations (Evensen et al, 2012). However, there is a marked contrast between the emotional experience and expression of individuals diagnosed with schizophrenia, who consistently report less experience of positive affect but greater intensity of negative affect than people included as comparison participants. It is further known that individuals with psychosis have problems with emotion recognition, likely to be present before psychosis onset (Amminger et al, 2012), and linked to social dysfunction, (Kimhy et al, 2012, 2014) and metacognition (Hamm et al, 2012). A recent study of people diagnosed with psychotic disorder demonstrated that this impaired ability to be aware of and to tolerate distressing emotions was associated with increased stress, as measured by both self-report and skin conductance levels (Lincoln et al, 2015). Interestingly, an altered, heightened sensitivity to stress has previously been established as a risk mechanism for psychosis (Myin-Germeys & van Os, 2007). Furthermore, impaired stress tolerance has been associated with negative as well as other symptoms in individuals at high clinical risk of developing psychosis (DeVylder et al, 2013). Although people with psychosis may experience but be less aware of heightened negative affect, they use similar emotion regulation strategies to individuals with anxiety and depressive disorders (Livingstone et al, 2009). However, they use more dysfunctional regulation strategies (e.g. suppression) than non-patient controls (O'Driscoll et al, 2014). To summarise, individuals prone to psychosis demonstrate emotional reactivity in conjunction with a diminished awareness of their own affective state, but use normal, if ultimately maladaptive,

regulatory processes to deal with emotional arousal. This style of dealing with emotional information might shape negative symptom expression.

Adults with dismissing attachment states of mind direct their attention away from emotion and complex mental states, possibly reflecting a developmental adaptation to persistent rejection from caregivers at times of distress. Consistent with this, the degree of critical comments from family members was more strongly associated with negative symptoms than positive symptoms (Barrowclough et al, 2003; for a broader discussion of attachment and expressed emotion see Patterson elsewhere in this volume). At the core of mentalization is 'mentalized affectivity' (Fonagy et al, 2002), the capacity to reflect upon the meaning of one's emotional states as they unfold. The inability to reflect upon emotional distress and its psychosocial causation is not only likely to result in diminished expressivity, but may also block social behaviour, given that distress fails to be communicated. Possible links between unhelpful self-focus (e.g. rumination) and the use of emotional avoidance and withdrawal strategies to deal with interpersonal difficulties have been demonstrated (e.g. McLeod et al, 2014).

The reduced capacity to experience *positive* affect is also likely to play a key role in the development and maintenance of negative symptoms. It is unsurprising that there is little opportunity for positive affect if an individual finds their own or others' minds confusing and/or threatening and uses emotional, behavioural and social avoidance as primary regulatory strategies. Low expectations of pleasure and success lead to further lost opportunities for meaningful engagement in activity, and become a self-fulfilling prophecy (Rector et al, 2005) that consolidates the maintenance cycle. Although *anticipation* of pleasure may be impaired, individuals with a high level of

anhedonia can still experience a normal enjoyment response once they are engaged in a pleasurable activity (Gard et al, 2007).

Autobiographical memory and personal identity

The impact of early attachment experience, particularly the ability to recall and reflect on its significance, has long been associated with the development of the sense of self (Cole & Putnam, 1992; Briere, 2002; Conway & Pleydell-Pearce, 2000). The contribution of autobiographical memory to the self is, however, known to be tempered by the need for a coherent and consistent sense of one's self and identity (Conway et al, 2004). For example, when an individual is overwhelmed by life experience, the drive for returning to a stable sense of self identity is given priority over the integration of threatening personal information that goes against one's values or that is inconsistent with one's self-view. In such circumstances, individuals with a dismissing/avoidant attachment style appear to restrict attention to attachment experience, providing sparse personal life-stories in which difficulties appear downplayed. More broadly, this so-called 'overgeneral memory' is considered to be a strategic attempt to control affect associated with specific negative events (Williams et al, 1999). Within various clinical groups, including individuals diagnosed with schizophrenia, lack of specificity in personal memory recall seems to have an adaptive function in the prevention of suicidality (Taylor et al, 2010).

Such self-regulation may come at considerable personal expense. The personal narratives of individuals with dismissing attachment states of mind typically fail to articulate emotional experience, appearing remote and abstract, fragmented, undeveloped and inflexible. Coupled with the ongoing disruption of mentalization,

this distorted recall of key life experience may confer risk for negative symptoms. Attempts to dampen down emotional fluctuations may not only result in restricted expression of affective experience, but also impact on goal-directed activity. In Conway and Pleydell-Pearces's (2000) self-memory system framework, autobiographical memories are seen as forms of mental models that are distinct by virtue of containing self-knowledge and memories for specific episodes experienced in one's life. Importantly, the self-memory system also includes the self's working goals. In this way, autobiographical memory and the sense of oneself as being able to actively influence one's life are intrinsically linked: autobiographical memory 'constrains what the self is, has been and can be' (Conway, 2005). Restricting access to autobiographical memory in order to preserve self-coherence may therefore come about at the expense of engagement in goal-directed activity, and associated development of avolition/apathy.

It has been well documented that people with a diagnosis of schizophrenia have problematic recall of personal past events (Berna et al, 2015). The impact of this may be particularly evident during a crucial period for identity formation i.e. late adolescence (Cuervo-Lombard et al, 2006). Difficulty recalling autobiographical memories or reduced memory specificity is not, of course, specific to schizophrenia, but present in various mental health problems including depression (Liu et al, 2013) and post-traumatic stress (Moore & Zoellner, 2007). Childhood trauma is linked to impairments of memory for earlier life experiences across diagnoses, including in people who have received a diagnosis of schizophrenia (Shannon et al, 2011). Such experiences have been hypothesised to play a specific role in the development of negative symptoms (Read et al, 2001). Relationships have been identified between

negative symptoms and autobiographical memory performance (Aleman et al, 1999; Schmid et al, 2011) and specifically with traumatic memories (McLeod et al, 2006). In a small study exploring the relationships between negative symptoms and autobiographical memory, those with more negative symptoms retrieved fewer specific autobiographical memories and negative symptoms were significantly predicted by both avoidance of traumatic memories and lack of specificity of autobiographical recall (Harrison & Fowler, 2004). Finally, Berna et al (2011) showed that an impaired ability to give meaning to memories that have a strong influence on one's development of self-identity is associated with higher levels of negative symptoms.

Agency can be broadly understood as the basic recognition of the experience of owning and generating one's own thoughts, feelings and behaviours (Lysaker & Leonhardt, 2012). This is a fundamental starting point for experiencing more complex thoughts and is therefore a foundation capacity underpinning metacognition/mentalisation. It is likely that self-regulatory processes associated with impairments of autobiographical memory interact with both the capacity for mentalisation and cognitive variables such as self-efficacy (i.e. appraisals of ones ability to act successfully in the face of challenges). Negative symptoms are associated with reduced self-efficacy (Bentall et al, 2010; Hill & Startup, 2003) as well as the endorsement of attitudes that undermine functioning (e.g. "If you cannot do something well, there is no point in doing it at all") (Ventura et al, 2014). Recent research also suggests that negative symptoms develop in response to self-defeatist beliefs, and these beliefs may affect social functioning because they undermine the ability to see oneself as competent and able (Vaskinn et al, 2015). It seems likely that

relationships between self-efficacy, dysfunctional attitudes and negative symptoms are mutually reinforcing. As an individual's experience and sense of autonomy become ever more restricted, negative symptoms become more entrenched, further restricting opportunities for rich life experience. Given that the sharing of personal stories is fundamental to the development of meaningful human relationships, restricted life narratives may foster increasing isolation. Beliefs about loss, humiliation and entrapment (Iqbal et al, 2000) may then further limit an individual's ability to build an assertive identity as an agentive self who is capable of participation in interpersonal domains.

The costs of these self-regulatory processes are evident in those individuals whose recovery style following the trauma of an acute episode of psychosis has been characterised as 'sealing over'. These individuals tend not to try to integrate or make sense of their psychotic experience in the context of their overall life experience (McGlashan, 1987). Such avoidant coping styles are associated with negative early childhood experience, insecure attachment, negative self-evaluation and insecure identity (Tait et al, 2004). Sealing over is associated with higher levels of negative symptoms (Modestin et al, 2004, 2009; Thompson et al, 2003), poorer social functioning and lower quality of life (McGlashan, 1987; Drayton et al, 1998).

To summarise, it is known that attachment states of mind and the associated capacity for mentalization are significant determinants of the production of self narratives, the evolution of a personal sense of meaning to life experience and the generation of personal identity. Psychological adjustment to life experience that is underpinned by the restriction of attention to personal memory gives priority to the preservation of a coherent personal identity whilst compromising the self's ability to drive future

activity. Such self-regulation may therefore constitute significant risk not only for the emergence of diminished expressivity but also for avolition and motivational difficulties, and impinge significantly on the ongoing evolution of personal identity.

Limitations of pure deficit models – critique of contemporary models

Negative symptoms have typically not been a main treatment target in psychological treatment trials for psychosis over the past two decades (Velthorst et al., 2015). This lack of therapeutic attention is unfortunate given that there is convincing evidence that addressing negative symptoms such as apathy and lack of initiative is a top treatment priority for many people with psychosis (Sterk et al, 2013). Recently more studies have specifically addressed the psychological understanding and treatment of negative symptoms in psychosis with four trials published between 2006-14 where allocation to treatment of a comparison condition was determined at random (see McLeod et al, 2014 for further discussion). The description of the intervention in three of these trials was based on a form of the standard cognitive behavioural therapy model that proposes that low expectations of success in social and functional spheres undermine role engagement and effort expenditure (Grant & Beck, 2009; Rector et al, 2005). This model leads to the use of treatment strategies such as challenging defeatist cognitions, supporting goal setting, testing out beliefs and expectations in real world situations, and making deliberate plans and schedules of activities (Grant et al, 2012). However, the data arising from these trials suggest the need for refinement of the standard CBT model. One indicator of this is that the standard approach may require a large number of treatment sessions to get quite modest symptom improvements (e.g. Grant et al.'s 2012 trial delivered an average of 51 sessions). Also, the standard CBT approach does not seem to be superior to strategies such as

Cognitive Remediation Therapy that do not explicitly focus on changing thoughts and beliefs (Klingberg et al., 2011). These results do suggest that it is possible to make some progress in helping with negative symptoms via psychological methods. We suggest that viewing negative symptoms from the perspective of attachment theory has implications for understanding the delivery of psychological treatments, which may be improved if we develop techniques that more directly target relational factors and the attachment concerns already described. The following case example points to many of these issues.

A Case Example

In the following example, we examine how applying attachment principles to case formulation could lead to useful adaptations of a commonly used therapy, cognitive behavioural therapy. Andreas is a 38-year-old man who lives at home with his elderly mother. His first episode of psychosis at 18 years of age resulted in a hospital admission. At that time he was experiencing distressing hallucinations and paranoia, he was socially withdrawn, had given up attending college and was isolating himself in his bedroom. He was originally encouraged to see his GP by his mother who was increasingly concerned that he was neglecting his self-care and losing weight. When first assessed, he was reluctant to discuss any sources of distress and he denied any need for help or support. The clinical team found it very difficult to engage Andreas in treatment activities. Even gentle encouragement would sometimes result in an agitated and hostile response. This discouraged the clinicians from continuing to push for engagement. A pattern of minimal interaction developed, with the focus of intervention mainly limited to safety monitoring and medication support.

Andreas was eventually referred for psychological treatment. The main areas of concern at that time were his arrested recovery and pervasive failure to engage with social and occupational activities. The assessment and engagement phase of therapy took eight sessions of gradual titration of contact. Andreas' therapeutic goals were to improve his motivation and to understand what was going on in his life, but he was reluctant to set himself any targets in terms of increased activity and was unable to identify potential sources of pleasure. In view of the fact that people with a diagnosis of schizophrenia may experience a form of anhedonia that arises from a fundamental impoverishment of internal experience such that they have substantial difficulty reflecting on and being fully aware of their likes, preferences, wishes, and goals (Buck et al., 2014), the therapist was aware that trying to set goals and engage in activity scheduling in the standard CBT approach may be experienced as stressful rather than therapeutic.

It was therefore agreed to spend the next sessions improving his self-understanding. Although he repeatedly downplayed the severity of his current difficulties, Andreas did slowly open up about early difficulties attributable to his mother's alcoholism. He had been repeatedly sent to live with relatives at times when his mother was unable to cope. During many of these episodes he was sexually and physically abused. Although he made these disclosures, Andreas continued to describe many of these experiences in a dispassionate and unemotional way during this early phase of therapy. Although slow exploration of early memories and perceptions of key experiences were summarised by the therapist into a time-line, Andreas found it extremely difficult to reflect on how his early experiences might have had an impact on his current situation. Throughout therapy, the therapist maintained an awareness

that people exhibiting an avoidant attachment style will likely experience the therapeutic relationship to be a source of stress and threat which may elicit deactivating emotion regulation strategies such as social withdrawal and down-regulation of metacognition (Gumley et al, 2014; Lysaker et al., 2015). This prompted the therapist to be particularly sensitive to relational patterns during sessions, attending to pacing and timing of sessions, continuously assessing the client's tolerance for addressing previously avoided emotional material, and actively working to strengthen the security of the therapeutic relationship. The experienced therapist required regular supervision to support this kind of work. Such strategies facilitated the development of a therapeutic relationship that the therapist believed was able to provide a helpful emotional experience (Daly & Mallinckrodt, 2009; Mallinckrodt & Jeong, 2015).

Adding these attachment dimensions to Andreas' therapeutic formulation also guided the matching of therapeutic strategies to the level of metacognitive capacity exhibited by him. The formulation that emerged over time was that Andreas had coped with repeated episodes of abusive behaviour from caregivers through social and emotional withdrawal. His aim was to become as inconspicuous as possible. Andreas' mental model of others became dominated by the view that people were at best unreliable as sources of support and at worst, dangerous and abusive. Unsurprisingly, he also seemed to have an impoverished capacity to think about the reasons why others act in the way that they do. Having had little opportunity to learn effective self-regulation, attempts to consider his own mental states were similarly experienced as overwhelmingly painful.

In this case we can see how there were barriers to implementing a standard CBT approach. Andreas' difficulties with engagement with professional carers and the limited emotional connectedness to his mother both reflect a fundamental disruption of the ability to use relationships to meet challenges, soothe negative affect or provide a source of encouragement and drive to engage with life challenges. Goals that involved any level of social connectedness and interpersonal relating activated distress, confusion and withdrawal behaviours. The goal setting process was further impeded by Andreas' diminished ability to reflect on his autobiographical memories and lack of access to previous sources of reward and meaning. Engaging in standard CBT techniques of exploring thoughts and feelings about others (e.g. expectations of low social acceptance) was difficult for Andreas because he experienced them as highly aversive.

Instead, Andreas' therapist used the formulation to guide treatment in the following ways. First, the carefully titrated engagement and assessment process created an opportunity to decrease the threat associated with interpersonal contact. The next therapeutic task was to help Andreas explore and differentiate his thoughts, feelings, goals, aspirations and wishes (e.g. see Lysaker et al., 2011 for a description of principles underpinning this approach). This then led to the therapist providing a model of her mind by describing in transparent terms some of the thoughts and understandings that occurred as therapy progressed. At a more subtle level, the therapy interaction also provided opportunities to shape up expressive behaviours that facilitated social interactions (e.g. the therapist explicitly provided feedback when she noticed an expression of affect passing across Andreas' face). This provided an opportunity for Andreas to practise noticing and reflecting on mental states in a way

that minimised threat, ambiguity, and misinterpretation. He was gradually encouraged to communicate to the therapist when he was experiencing high levels of affect during the session. The therapist then prompted the use of strategies such as grounding and soothing techniques. Once the basic ability to engage in conversations about thoughts, feelings, goals, and aspirations had been re-established, therapy could move on to more conventional CBT strategies such as setting between session behavioural tasks, examining the accuracy of thoughts and beliefs that undermine behaviour change (e.g. engaging socially with others will always be unrewarding), and gradually expanding the range of behaviours that Andreas was willing to attempt (e.g. scheduling an achievable array of master and pleasure focused tasks).

This approach uses an understanding of attachment states of mind and the associated problems with mentalisation to reach people who are less responsive to standard CBT for negative symptom strategies. Our suggestions share commonalities with other variants of mentalization-based therapy which have recently been adapted for individuals diagnosed with psychotic disorder to facilitate therapeutic alliance (Brent, 2015) and social functioning (Weijers et al, 2016). Most importantly, these approaches all identify the need to specifically target disturbances in thinking capacities related to awareness of self and others. Sensitively titrated therapy adapted along mentalization-based therapy principles provides an opportunity to learn the interpersonal thinking and relating skills needed to re-engage with more traditional goal and task focused CBT.

Conclusions

There is increasing recognition that interventions for negative symptoms of schizophrenia require more attention. In fact, data collected from people diagnosed with psychoses suggest that improving motivation and self understanding are highly ranked treatment targets (Byrne & Morrison, 2015; Sterk et al , 2013). In this chapter, we have tried to articulate an important but often overlooked issue for psychological treatments: there is a need to tailor the treatment strategies not just to address cognitive maintenance factors (e.g. self-defeating cognitions) but also to take account of relevant sources of resilience (Dudley et al, 2011) and interactions between distal risk factors such as abuse, neglect, and disrupted attachment (Nolen-Hoeksema & Watkins, 2011). For some people exhibiting negative symptoms, attempts at standard approaches (e.g. CBT, social skills training) may not be possible until the impact of disrupted attachment has been assessed, understood, and incorporated into the formulation and treatment plan. As our case study portrays, without attention being paid to these issues the likelihood of successful recovery is greatly reduced.

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